

Deccan Education Society's
Brihan Maharashtra College of Commerce(AUTONOMOUS)
TYBBA(CA)(Sem-VI) Practical Examination
LAB COURSE SEM VI (PYTHON & LINUX)

1. Write a Python program to print the following pattern. (15)
1
2 3
4 5 6
7 8 9 10
2. Write a python program to accept string and remove the characters which have odd index values of given string using user defined function. (25)
3. List all the help file for ls command without using “man” command. (15)
4. Write a shell script to take input of two integerrrs from user and display their modulus and multiplication.
If user enters two numbers 6 and 5, the output should be
The modulus of 6 and 5 is 1.
The multiplication of 6 and 5 is 30. (25)
5. Journal (10)
6. Viva (10)

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1. Write a Python program to print whether a given number is Armstrong or not. (15)
2. Write a Python function that accepts a string and calculate the number of upper case letters and lower case letters. (25)
3. Create a directory structure 123/456/890, create a 0 byte file inside “456” directory named “abc” while staying inside ~ (home) as your present working directory. (15)
4. Write a shell script to accept an operand from user and use increment and decrement operators on it.

For operand 8, the output should be

8++ = 9

8-- = 7 (25)

5. Journal (10)
6. Viva (10)

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1. Write a python program to reverse a string. (15)
2. Write a Python program to check if a given key already exists in a dictionary. If key exists replace with another key/value pair. (25)
3. List the files and directories according to their modification time (oldest first). (15)
4. Write a shell script to take input of two integers from user and display their addition and subtraction.
Ex.: If user enters two numbers 6 and 5, the output should be
The addition of 6 and 5 is 11.
The subtraction of 6 and 5 is 1. (25)
5. Journal (10)
6. Viva (10)

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1. Write a Python Program to Check if given number is prime or not. Also find factorial of the given number using user defined function. (15)
2. Write a python script to define a class student having members roll no, name, age, gender. Create a subclass called Test with member marks of 3 subjects. Create three objects of the Test class and display all the details of the student with total marks. (25)
3. Create a directory structure abc/pqr/xyz/def, delete the directory “xyz”. (15)
4. Write a shell script and check if a file /dev/console is a block file or not. (25)
5. Journal (10)
6. Viva (10)

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1. Write an anonymous function to find area of square and rectangle. (15)
2. Write Python script to create two text files. Enter data in each file and merge the data in the third file. (using function). (25)
3. List all the details of “man” command. (25)
4. Write a shell script to take input of two integers from user and display their subtraction and comparison.
If user enters two numbers 6 and 5, the output should be
The subtraction of 6 and 5 is 1.
6 is greater than 5. (25)
5. Journal (10)
6. Viva (10)

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LAB COURSE SEM VI (PYTHON & LINUX)

1. Create a list a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89] and write a python program that prints out all the elements of the list that are less than 5. (15)
2. Write a Python class which has two methods get_String and print_String. get_String accept a string from the user and print_String prints the string in upper case. Further modify the program to reverse a string word by word and print it in lower case. (25)
3. Use the ls -l command but show the output of Size column in human readable format without using “—block-size” option. (15)
4. Write a shell script and check if a file /dev/full is a character file or not. (15)
5. Journal (10)
6. Viva (10)

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- 1) Write a Python program to accept n numbers in list and remove duplicates from a list. (15)
- 2) Write a python script to define the class Person having members name, address. Create a subclass called Employee with member salary. Create 'n' objects of the Employee class and display all the details of the employees. (25)
- 3) Create a directory structure abc/pqr/xyz/def, make your present working directory abc/pqr/xyz/def, and then change your present working directory to /etc/hosts using RELATIVE PATH. (15)
- 4) Write a shell script and check if a file /dev/mapper is a directory file or not. (25)
- 5) Journal (10)
- 6) Viva (10)

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LAB COURSE SEM VI (PYTHON & LINUX)

1. Write a Python program that encrypts a message by adding a key value to every character. (15)
2. Write a Python script using class, which has two methods get_String and print_String. get_String accept a string from the user and print_String print the string in upper case (25)
3. Use echo command to print five \ (backslash) in a row without spaces. (15)
4. Write a shell script to use LOGICAL AND (&&) operator on two operands. For two operands "TRUE" and "FALSE", the output should be
Both are not TRUE. (25)
5. Journal (10)
6. Viva (10)

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1. Write a python script to find the repeated items of a tuple. tup=(1,2,2,3,4,4)
(15)
2. Write a python program to count repeated characters in a string.
Sample string: 'thequickbrownfoxjumpsoverthelazydog'
Expected output: o-4, e-3, u-2, h-2, r-2, t-2
(25)
3. List all the directories along with its subdirectories recursively. (15)
4. Write a shell script to take input of two integers from user and compare them and display which one is greater.
If user enters two numbers 6 and 5, the output should be
6 is greater than 5. (25)
5. Journal (10)
6. Viva (10)

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1. Write a Python program to implement the concept of queue using list. (15)
2. Write a python program to count number of upper case letters, small case letters, digits in the file. (25)
3. Try changing permissions of a non-existent file but the command output shouldn't show any error message at all. (15)
4. Write a shell script to accept two numbers from user and display their addition and increment.

If user enters two numbers 6 and 5, the output should be

The subtraction of 6 and 5 is 11.

5++ = 6

6-- = 5 (25)

5. Journal (10)
6. Viva (10)

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LAB COURSE SEM VI (PYTHON & LINUX)

1. Write a Python program that counts the number of occurrences of a character in a string. (15)
2. Write a Pickle python program to write and read a data from a file stating the position of the file object. (Using dump(), load() functions). (25)
3. Create a directory structure abc/123/pqr, change the name of directory “pqr” from “abc” as your present working directory. (15)
4. Write a shell script and check if a file /dev/tty7 is a character file or not. (25)
5. Journal (10)
6. Viva (10)

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1. Write a Python script to generate and print a dictionary which contains a number (between 1 and n) in the form(x:x*x). Sample Dictionary (n=5)
Expected Output: { 1:1, 2:4, 3:9, 4:16, 5:25 }
(15)
2. Write a file handling program in python, which opens the file 'report.txt' and write data into it. Use the seek() and tell() functions in python while reading the data from the file.
(25)
3. List the contents arranged horizontally instead of usual vertical arrangement (sorted row-wise instead of column-wise).
(15)
4. Write a shell script to use LOGICAL OR (||) operator on two operands. For two operands "TRUE" and "FALSE", the output should be
Either of the two is TRUE.
(25)
5. Journal
(10)
6. Viva
(10)

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1. Write a python script to implement bubble sort using list. (15)
2. Write a python script to create a class Rectangle with data member's length, width and methods area, perimeter which can compute the area and perimeter of rectangle. (25)
3. Create a 0-byte file and change the permissions of a file to "rwxr-x—x" while displaying what changes were exactly made to current permissions. (15)
4. Write a shell script to accept two numbers from user and display their multiplication and subtraction.
If user enters two numbers 6 and 5, the output should be
The multiplication of 6 and 5 is 30.
The subtraction of 6 and 5 is 11. (25)
5. Journal (10)
6. Viva (10)

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1. Write a Python program to convert a tuple of string values to a tuple of integer values.
Original tuple values: (('44', '444'), ('1516', '45')) New tuple values: ((44, 444), (1516, 45)) (15)
2. Write a python program to fully reverse the contents of file and write it in another file. (25)
3. Remove all the read permission of all files and the files inside subdirectories of present working directory. (15)
4. Write a shell script to List the files and directories inside present working directory recursively without applying any sorting or color coding. (25)
5. Journal (10)
6. Viva (10)

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LAB COURSE SEM VI (PYTHON & LINUX)

1. Write a Python program to accept two lists and merge the two lists into list of tuple. (15)
2. Write a python program to create a class Circle and compute the Area and the circumferences of the circle.(use parameterized constructor) (25)
3. Create a directory structure abc/123/pqr, change the name of directory “pqr” from “abc” as your present working directory. (15)
4. Write a shell script to accept today's date from user in MM DD YY format and display it as below.
Date is 17/05/22. (25)
5. Journal (10)
6. Viva (10)

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1. Write a Python script to sort (ascending and descending order) a dictionary by key. (15)
2. Define a class named Shape and its subclass Square. The subclass has an init function which takes an argument Length. Both classes should have methods to calculate area and perimeter of a given shape. (25)
3. Use binary calculator to perform multiplication and division of any two integers. (15)
4. Write a shell script to list the files and directories with their size in GB. (25)
5. Journal (10)
6. Viva (10)

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1. Write a Python program to unzip a list of tuples into individual lists.
L= [(1,2), (3,4), (8,9)] (15)
2. Write Python program that has a class Person storing name and date of birth(DOB) of a person. Subtract the DOB from today's date to find out whether a person is eligible to vote or not. (25)
3. List all the directories except . and .. (15)
4. Write a shell script to list the files and directories according to their modification time recursively. (25)
5. Journal (10)
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1. Write a Python program to compute element-wise sum of given tuples.
Original tuples: (1, 2, 3, 4) (3, 5, 2, 1) (2, 2, 3, 1)
Element-wise sum of the said tuples: (6, 9, 8, 6) . (15)
2. Define a class Employee having members id, name, department, salary.
Create a subclass called Manager with member bonus. Define methods
accept and display in both the classes. Create n objects of the Manager class
and display the details of the Manager having the maximum total salary
(salary+bonus). (25)
3. List the files and directories with their size in GB. (15)
4. Write a shell script to add permissions 753 to all the directories and
subdirectories recursively. (25)
5. Journal (10)
6. Viva (10)

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1. Write a Python script using class to reverse a string word by word. (15)
2. Write a Python class named Student with two attributes student_name, marks. Modify the attribute values of the said class and print the original and modified values of the said attributes. (25)
3. Use redirection operator (>) to write today's date in a file named "bmcc". (15)
4. Write a shell script to write all the files and subdirectories inside / (root) directory to a file called "tree" in present working directory. Use redirection operator to redirect output of your shell script to "tree" file. (25)
5. Journal (10)
6. Viva (10)

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1. Write a python program to print Fibonacci series using recursion. (15)
2. Write a python program to print the contents of file in reverse order. (25)
3. Create directory structure abc/123/pqr, change the name of directory “abc” from “pqr” as your present working directory. (15)
4. Write a shell script to display help pages of any three commands and return to the shell prompt automatically. (25)
5. Journal (10)
6. Viva (10)